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State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Solid Waste Management



James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
William L. Meyer, Director

January 17, 1996

Mr. Gary McSmith
Atlantic Division Naval Facilities Engineering Command
Code 18234
1510 Gilbert Street
Norfolk, VA 23511-2699

**Subject: Comments on Draft Focused Remedial Investigation/Feasibility Study
Report for Operable Unit 1 Groundwater
MCAS-Cherry Point, NC**

Dear Mr. McSmith:

The North Carolina Superfund Section has reviewed the subject document.
Enclosed are our comments.

If you have any questions, please do not hesitate to contact me at (919) 733-2801,
extension 340.

Sincerely,

Linda F. Raynor
Environmental Engineer
NC Superfund Section

cc: Jack Butler
Richard Powers
Gena Townsend
Renee Henderson
Matt Cochran

**DRAFT FOCUSED REMEDIAL INVESTIGATION/FEASIBILITY STUDY
REPORT FOR OPERABLE UNIT 1 GROUNDWATER**

(Report Dated November 1995)

Comments from NC Superfund Section

General Comments:

1. Treatment alternatives discussed in this document include discharge to the ITP and STP. Are these facilities currently operating satisfactorily and meeting their discharge requirements? Can these systems handle the extra load of contaminated groundwater and still be in compliance with their discharge limits? Please add discussion on these matters. If they are not in compliance and cannot handle the extra load, there is no reason to consider discharge to these facilities.

2. The text indicates that leaks have been detected at several locations in the piping connecting the industrial area to the industrial sewer system. What is the current status of the repairs to these leaks, and what is the overall integrity of this piping system? (See also specific comment 13 below.)

3. Cross sections should indicate water level information (water table location and date measured) and the dates for the lab data shown on the cross sections.

4. Please recheck the tables in Section 4 to ensure accuracy. For example, it appears that Table 4-2 is a comprehensive list of parameters detected in surface water at OU-1, however, some of the miscellaneous parameters listed in Tables 4-5 and 4-6 are not included in Table 4-2.

Specific Comments:

1. Page ES-1 - What is meant by "primary" groundwater contamination? Please clarify.

2. Page 1-2, last para. - "There are at least two other groundwater hot spot areas at OU1 that are not being addressed in this report." Please elaborate - Are these areas to be addressed under the UST program for the base, or will these areas be addressed during the continuing investigation and remediation of OU-1 under the IRP program?

3. Page 1-7 and Figure 1-2 - Need to check that the sites listed here correspond with Figure 1-2 and are referenced correctly in the text and figure. For example, Sites 42 and 60 are missing from Figure 1-2, the text lists "Site 71" whereas the figure indicates "SWMU 71," Site 72 is on the figure, but not listed here, and the figure references "MCON P-500, whereas the text indicates "MCON P-507." Also, need to list UST sites for UST 1220, UST 4032 and UST 1005.

4. Page 1-8, 2nd para. - “The landfill is approximately 11 acres in size and is located in the southeast...” Shouldn’t this be southwest?
5. Page 1-9, 1st para. - Add discussion based on General Comment 2 above.
6. Page 1-11, 4th para. - This paragraph references Figure A-1. Please clarify.
7. Page 2-7, 1st para. - “Additionally, six water supply wells within OU1--MCAS 15, 16, and 17” Need to place the locations of these wells on a map/figure for reference.
8. Table 2-2 - Water elevation listed as 4.24 feet for 16GW05 was plotted on Figure 2-1 as 2.4.2 feet. Please correct table and/or figure as necessary. Also, data for 51GW01 is missing from the table.
9. Figure 2-3 - Table A-1 indicates well S3W1 is a lower Yorktown well, while this figure indicates it is an upper Yorktown well. Please correct as necessary.
10. Page 2-16, 2nd para. - This paragraph discusses well 16GW24. Where is this well located and shouldn’t this well also be included in Table 2-2?
- 3rd para. - “**Nine** monitoring wells...” Figure 2-3 and Table A-1 both indicate that well 14GW39 is also a Yorktown well, therefore, should this be “**Ten**”? Also, there is a conflict between information given in the text and Figure 2-3 regarding well MCAS 16; the text indicates it has been converted to a monitoring well in the Castle Hayne aquifer and Figure 2-3 indicates that it is abandoned. Please clarify.
11. Page 2-33, 4th and 5th para. “For the surficial aquifer, the geometric mean of K equals 1.0 ft/day (based on a summary provided in Appendix C).” The USGS estimated 10 ft/day. Please explain the discrepancy. Likewise, for the Yorktown aquifer, the USGS estimated 15 ft/day, and this document indicates K equals 4.0 ft/day. Please explain.
12. Page 2-45, 2nd para. - “The main ecological elements associated with OU1 are the surface water bodies, namely Slocum Creek and Sandy Branch, and the forested wetlands.” What about School House Branch?
13. Page 3-31, Section 3.3 and Figure 3-9 - (See also general comment 2 above) - The text discusses existing source contribution and control and references Figure 3-9 which identifies leaks in several pipeline sections. As indicated on the figure, four of the eight sections have not been repaired. The text should elaborate somewhat on the problem areas that still do exist and how they will affect the proposed remediation. For example, it appears that the non-repaired line segments may still be problem areas in OU-1. Also, have all the problem tanks been removed, or do some still exist in OU-1? Will these problem areas be a continuing source of groundwater contamination at OU-1 in such a way that remedial efforts may be futile?

14. Page 4-2, 3rd para. - “Table 4-1 presents statistics for all OU1 groundwater...and State of North Carolina drinking water standards.” Change “drinking water standards” to “groundwater quality standards” and change table heading for Table 4-1 (and for Tables 4-3 and 4-4) accordingly.

15. Table 4-1 - Corrections are needed for several of the NC groundwater quality standards (some were either listed incorrectly or not listed at all). For example, the standard for di-n-butyl phthalate is 700 ug/l (listed as 3 ug/l) and the standard for diethyl phthalate is 5,000 ug/l (omitted from the table). Please recheck the standards against this table to ensure all entries are listed properly.

16. Tables 4-2, 4-5 and 4-6 - Regarding NC surface water quality standards: need to list the lower standard (aquatic life vs. human health) as the standard for parameters listed in the regulations (15A NCAC 2B .0200).

NOTE: For this investigation and for all future work, when parameters are detected in surface water samples but **not** listed in the regulations, contact Ms. Dianne Reid (919) 733-5083, extension 568, with the Division of Environmental Management, Water Quality Section, to obtain the applicable standards. She will need to be provided a cover letter requesting this information on behalf of MCAS-Cherry Point and referencing me, Linda Raynor, as your State RPM contact, along with a table of the parameters and results (such as Table 4-2) and a map designating the name and location of the surface water body being evaluated. When she completes the table, she will copy me on her response, and the information/standards supplied by Dianne should be incorporated into the reports submitted to the NC Superfund Section. These reports should have the exceedances of the surface water standards denoted somehow in the corresponding tables.

17. Page 4-16 - Need to provide definition of acronym “NSPS”.

18. Section 5.0 - Re: Identification and screening of technologies - The EPA has published a document entitled “Remediation Technologies Screening Matrix and Reference Guide” (EPA 542-B-93-005) that discusses several other treatment technologies that should also be included in this section and further evaluated. This document includes a chart that summarizes treatment technologies for various media and contaminant type, and rates them according to the nine evaluation criteria. Several in-situ biological and physical/chemical technologies are listed in this chart that are not identified in this report and may be applicable to OU-1. Another source of information regarding treatment technologies that can be sorted by media and contaminant type is the EPA VISITT (Vendor Information System for Innovative Treatment Technologies) database. Perhaps this database and the EPA document mentioned above should be reviewed to prepare a more comprehensive list of potential treatment technologies for OU-1.

19. Page 8-5, last para. - “A potential implementability concern for **Alternative 3** is that, if the ITP/STP cannot accept the pretreated groundwater, then the extraction system must

be shut down and the interim action objective would not be achieved.” Shouldn’t this reference be for **Alternative 4**? Also, is this statement referring to the ITP/STP not being able to accept the pretreated groundwater because of the groundwater contaminant concentrations or the amount of extra flow that will be entering these plants from the groundwater treatment system? Please clarify.

20. Table 8-1 - After all the discussion and evaluation of treatment technologies presented in this report, Table 8-1 presents the relative ranking summary for the NADEP central hot spot area. This table ranks Alternative 4A (Extraction/Air Stripping/Discharge to ITP or STP) as the #1 choice, based on all categories. However, as stated on page 8-5 (and in comment 19 above), “... if the ITP/STP cannot accept the pretreated groundwater, then the extraction system must be shut down and the interim action objective would not be achieved.” At this time, it is unknown if the ITP/STP can even accept the groundwater, therefore, perhaps the implementability, short-term and long-term effectiveness for this alternative should not be rated as “1”.

21. Figure 10-1 - What is the rationale for not placing air sparging and vapor extraction wells along the east bank of Slocum Creek, adjacent to the Site 16 landfill? (Figure 2-1 indicates groundwater flow in this area is moving westward, to the creek.)